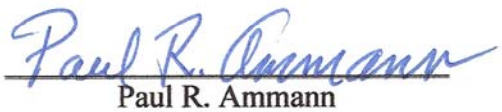
REBUTTAL EXPERT REPORT
CONCERNING COSTS AT THE
COEUR D'ALENE SUPERFUND SITE
IN THE ASARCO LLC CHAPTER 11 BANKRUPTCY MATTER
CASE NO. 05-21207

Prepared by



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INTRODUCTION

I have reviewed the expert reports of Jeffrey Zelikson and Richard Lane White of LECG (referred to as "LECG") prepared on behalf of Asarco, LLC with respect to the estimated future response costs at the Coeur d'Alene Superfund Site. I have concluded that LECG has understated the present value of the future remedial costs at the Coeur d'Alene Superfund Site,[1] even for the future remedial scenario that they propose. I have also made an adjustment for the future response costs in the Bunker Hill Box based on new information produced after I issued my original report. The explanations for my conclusions are described in the following sections of this report. I have provided an updated list of documents considered in Appendix A.

This report sets forth the details of my opinions to date, the bases and reasons that support my opinions, and the data and other evidence upon which I have relied in forming my opinions. I have considered the information available to me at the time of its preparation. I may supplement or modify this report based on new or additional information or rebut or respond to any information or conclusions offered by the debtor or its experts.

REBUTTAL OPINIONS

LECG has undervalued their estimate of future costs at the Coeur d'Alene Superfund Site for the following reasons:

[1] The Coeur d'Alene Superfund Site is comprised of three operable units ("OU"s): OU 1 for the populated portion of the Bunker Hill Box; OU 2 is for the non-populated portion of the Bunker Hill Box; and OU 3 is for the Coeur d'Alene River corridor, adjacent flood plains, downstream water bodies, tributaries, and fill areas. On June 15, 2007, I submitted two reports, one addressing OUs 1 and 2, with a second report addressing OU 3. This rebuttal report covers topics for both the Bunker Hill Box and the Coeur d'Alene Basin.

1. LECG has underestimated the future response costs for OU 1 and OU 2 by neglecting necessary future activities.

The Institutional Control Program ("ICP") will continue indefinitely,[2] that is, significantly longer than the 30 years assumed by LECG, and future development in the region will necessitate an expansion of the Page Pond with associated construction, and annual operating and maintenance ("O&M") costs.

2. Future response costs for the OU 3 Human Health Remedy have increased compared to the 2002 Record of Decision. LECG did not account for an increase in the scope of the project nor 100 years of future O&M and activities associated with the Information and Intervention Program.

The costs for the Human Health Remedy in OU 3 will increase over those defined in the 2002 Record of Decision ("ROD") because the scope of work for residential yards and rights-of way has nearly doubled and the Aquatic Foods Program will continue indefinitely. Further the necessary O&M and Information and Intervention Program will be required for at least 100 years.

3. LECG has assumed that there is a high probability EPA will modify the 2002 Record of Decision and will implement a plan proposed by the Mining Companies. Moreover, LECG has underestimated the cost of their alternative plan.

The cost of the remedial alternative proposed by the Mining Companies is based on a plan and associated costs prepared by Steven Werner. Werner's plan is only conceptual and even he, in his 2004 expert report, acknowledged that the scope of work might increase.[3] Werner underestimated the indirect construction costs, including contingencies, in his cost estimate.

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[2] Amended Declaration of Robert Hanson with Regard to The Bunker Hill Mining and Metallurgical Complex Superfund Site, with Exhibits, August 9, 2007, p. 2.

[3] Expert Report of Stephen Werner, *United States v. ASARCO Incorporated, et al.*, No. 96-0122-N-EJL, August 24, 2004 (hereinafter "Werner Report").

4. LECG has ignored the fact that EPA, in its deliberations and analysis of the available alternatives, rejected the alternative proposed by the Mining Companies when it issued the Record of Decision in 2002.

The Environmental Protection Agency ("EPA"), after exhaustive analysis, has concluded that Alternative 3, the basis for the comprehensive remedy for human health and the environment as presented in the report of Cami Grandinetti, a Unit Manager in EPA Region 10,[4] best meets the requirements to protect human health and the environment and to comply with the applicable or relevant and appropriate requirements ("ARARs").[5] The alternative proposed by the Mining Companies was rejected as not being sufficiently responsive.

5. LECG has undervalued or neglected to put forth estimates for several other cost categories that are part of the comprehensive remedy selected by EPA.

LECG has not included adequate cost estimates for other components of a comprehensive remedy including remediation of the Spokane River, Lake Management, five-year reviews, governmental and agency oversight, and indirect costs.

6. LECG uses a discount rate that is too high.

LECG uses a rate that is higher than the appropriate rates based on financial analysis and thus understates the present value of the future remediation costs.

In addition to reviewing the LECG analysis, I also provide a supplemental analysis to my original work for OUs 1 and 2. I have calculated a lower net present value for the expansion of the Page Pond based on new information. The revised value for future work associated with the Bunker Hill Box is **$34 million** in present value year 2008 dollars

I provide further information on my opinions in the following sections.

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[4] Grandinetti, C., Report of the United States Environmental Protection Agency's Comprehensive Cleanup Approach for the Coeur d'Alene Basin, June 14, 2007 (hereinafter "Grandinetti Report").

[5] Grandinetti Report, pp. 24 - 25.

LECG UNDERESTIMATED THE FUTURE RESPONSE COSTS FOR OU 1 AND OU 2, THE BUNKER HILL BOX REMEDY

The authors of the LECG Report[6] based their estimate of the future response costs on the actual annual costs for continuing the ICP of $175,300 (in 2006 dollars) and on annual maintenance costs of $6,000 for the existing Page Pond repository. They have assumed that the ICP will continue for 30 years and O&M for the Page Repository for 100 years. The present value calculated at a 7 percent net discount rate, a rate that understates the present value of activities, is $2.27 million.[7]

Using an appropriate discount rate and extending the ICP for 100 years, as anticipated by EPA, the net present value is recalculated at $3.86 million (in 2007 dollars). These corrections represents a 70 percent increase over LECG's estimate.

Including both the continued costs for the ICP, maintenance for the existing Page Pond Repository and the future expansion, the present value for OUs 1 and 2 is approximately $34 million in year 2008 dollars (see my supplemental analysis at the end of this report). Thus, LECG underestimated the future response costs for OU 1 by nearly $32 million.

LECG UNDERESTIMATED THE FUTURE RESPONSE COST FOR THE HUMAN HEALTH COMPONENT OF THE OU 3 REMEDY

In their report, LECG expressly states that"[w]e adopted the scope of the human health remedy put forth in the ROD for OU 3."[8] They calculated costs based on completion of the remedy over four years (2007 through 2010) with O&M continuing for 30 years. With a credit of $22 million for work already completed[9] (which LECG assumes that all completed work was related to the

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[6] Expert Report of Jeffrey Zelikson and Richard Lane White of LECG on Behalf of ASARCO, LLC, June 15, 2007, p. 18 (hereinafter "LECG Report").

[7] LECG Report, p. 18.

[8] LECG Report, p. 27 and Attachment A, Table 3.

[9] LECG Report, p. 26, footnote 128.

Human Health Program) and using a 7 percent net discount rate and 2006 as the base year for calculations, they calculated a net present value of $78.85 million.

Apart from using an inappropriate discount factor, LECG has underestimated the net present value for several major reasons, which I describe in the subsequent sections. In general, LECG seems to neglect that activities have increased in scope with time and that essential long-term activities need to run in perpetuity.

Timing Of Expenditures. LECG incorrectly assumed that the O&M costs would be limited to 30 years, or less, because many costs will continue indefinitely.

Adjustments To Estimated Future Costs. In the five years since the 2002 ROD was issued, EPA has remediated numerous residential properties and rights-of-way, removed lead from a number of private houses, remediated a few of the recreational areas, and provided drinking water to a few residences under the Human Health Remedy, as described in the 2002 ROD[10] (and accompanying Feasibility Study). However, the last few years of work has revealed a larger scope for work for some of the future response activities. In addition, while the Feasibility Study/ROD calculated the present value of O&M costs over 30 years, EPA believes that many of the annual activities will continue indefinitely (100 years for the purposes of these calculations). These changes are summarized in Table 1, and explained briefly in the subsequent sections.

[10] Record Of Decision (ROD), Bunker Hill Mining & Metallurgical Complex, EPA ID: IDD048340921, OU 3, Smelterville, ID, September 12, 2002 (hereinafter "2002 ROD"),Table 12.1-11.

TABLE 1
SUMMARY OF CHANGES IN THE ESTIMATED PRESENT VALUE
FOR THE HUMAN HEALTH REMEDY OF OU 3

Item	ROD 2002 Dollars	ROD 2007 Dollars[1]	EPA Plan 2007 Dollars	Difference
Residential Yards, Rights-of-Way, *etc.* [2]	$78,635,454	$100,078,049	$129,148,966	$29,070,917
Recreation Areas	$5,920,000	$7,534,287	$6,362,198	($1,172,089)
Drinking Water	$2,200,000	$2,799,904	$2,657,101	($142,803)
House Dust	$4,288,000	$5,457,267	$4,256,638	($1,200,629)
Aquatic Food Sources	$910,000	$1,158,142	$3,001,778	$1,843,636
Information & Intervention Program			$17,781,185	$17,781,185
Total	$91,953,454	$117,027,649	$163,207,866	$46,180,217
Difference [vs. ROD in 2007 dollars)				39.5%

[1] The original costs presented in the ROD in December 2000 dollars are escalated to November 2006 dollars in column (2). The CCI in December 2000 was 6,283 and in mid-2007 it was 7,939. Therefore, the escalation factor is 1.2727.

[2] In the 2002 ROD, the cost for the Residential Yards and the Rights-of-Way were $43,635,454 and $35,000,000 respectively.

The costs of the Human Health Program have increased by about 39.5 percent. The primary reasons why the costs have increased versus the program described in the 2002 ROD include::

Residential Soils (Yards). The costs in the ROD were based on 1,379 residences.[11] After completion of a number of residential properties in the last few years, EPA now estimates that there are a larger number of properties that will require remediation. The number of remaining properties is estimated by EPA at 2,728, approximately twice as many as forecasted in the Feasibility Study/ROD.[12]

As described in the ROD, five repositories would have to be constructed in 2007 (one was constructed in 2004) to receive contaminated soils from residential and commercial properties.

[11] 2002 ROD,Table 12.1-11.

[12] Residences in Pine Creek have been excluded.

The increase in cost for O&M reflects a recalculation of maintenance costs for the repositories through 2037, or 30 years, and continued monitoring through 2106.

Rights-Of-Way, Commercial Properties, Common Areas. Costs to address cleanup for related properties have increased approximately in proportion to the number of residences. O&M costs have increased in proportion with the number of properties to be remediated.

Recreation Areas. EPA has already started addressing remediation of recreation areas and completed five to date listed in the 2002 ROD. But with the escalation of costs for the remaining recreation areas from 2000 dollars to 2007 dollars, and the extension of O&M from 30 to 100 years, the estimated present value has decreased by only about $1.0 million, in 2007 dollars.

House Dust. EPA plans to complete the remediation of houses contaminated with lead by 2011. The Lead Health Intervention Program will continue for 100 years, but these costs are included with the overall Information and Intervention Program. Therefore, the present value in 2007 dollars is $1 million less than the value in the 2002 ROD in 2007 dollars.

Drinking Water. The estimate in the 2002 ROD was $2.2 million in 2007 dollars. EPA estimates that the number of remaining residences has decreased from 171 to 166, but in 2007 dollars the cost has decreased slightly, as shown in Table 1.[13]

Aquatic Food Sources. In the ROD, the response costs were reported as "capital costs."[14] In actuality, the "Lead Health Intervention," "Labor/Equipment/Materials," and "Fish Sampling" Programs should be treated as extended O&M costs, and not capital, or construction, costs. EPA projects that the program will continue indefinitely and will provide data for the Five-Year Reviews. Therefore the calculated present value of the "Aquatic food Sources Program" increases from $1.1 million dollars (2007 dollars) in the 2002 ROD to a present value of about $3.5 million.

[13] Note that in my report, the "Information and Intervention" costs are considered as annual O&M costs, not as a "capital cost."

[14] ROD OU 3, ,Table 12.1-16.

Information And Intervention. Collectively for all elements of the Human Health Remedy, the annual cost for the Information And Information program is estimated at $53,905 in 2007 dollars. Further, EPA estimates that rather than some of the elements continuing for 15 or 30 years, they will be required for 100 years or more. The present value is calculated at approximately $17.8 million in present value year 2008 dollars.

LECG HAS ASSUMED THERE IS A HIGH PROBABILITY THAT EPA WILL MODIFY THE 2002 RECORD OF DECISION AND IMPLEMENT A MINING COMPANY PLAN WHICH IS UNDERESTIMATED

In the section of their Expert Report on the Ecological Remedy, LECG considered two alternatives to estimate the present value of the future costs for the remediation of Upper and Lower Basins. One of the alternatives was the 2002 ROD and the other a remedial program proposed by the Mining Companies. The latter has been described by Stephen Werner in his 2004 Expert Report.[15]

For the Upper Basin, LECG assumed that there is a 60 percent probability that EPA will implement the alternative proposed by the Mining Companies. There are several reasons why LECG has significantly underestimated the costs prepared by Werner, a plan reviewed and found insufficient by EPA, the ultimate decision makers at the Site.

Level Of Design

LECG has relied on Werner's description of the Mining Companies' remedial plan as a basis for an alternative remedial program. However, Werner acknowledged that ***"…this [Werner's] estimate is neither design nor conceptual-design based."*** In addition, he wrote ***"…this estimate provides no allowance for possible expansion of the list of sites/sources being addressed"*** [emphasis added].[16] Furthermore, it is not obvious that he included any allowance for

[15] Expert Report of Stephen Werner, *United States v. ASARCO Incorporated, et al.*, No. 96-0122-N-EJL, August 24, 2004 (hereinafter "Werner Report").

[16] Werner Report, Appendix D-1, p. D1-1.

groundwater collection and treatment, particularly in Canyon and Ninemile Creeks. Therefore, it would seem highly likely that Werner's plan will have to expand to achieve the cleanup levels for the Upper Basin.

Estimated Construction Costs

With the exception of an engineering cost equivalent to 5 percent of the construction cost, LECG has ignored important indirect construction costs that are critical components of any preliminary estimate. In fact their remedial construction cost estimates are low by nearly 50 percent. The reasons are explained by an inadequate provision for: (1) reasonable remedial design fees, (2) mobilization/general contractor costs, (3) project management, and (4) contingencies. I describe each of these components in the following sections.

Remedial Design, or Engineering. An engineering design phase of a project involves the collection and analysis of data, field surveys and analysis, treatability studies, preliminary designs, design development, preparation of drawings and specifications, and one or more cost estimates. During construction, the engineering firm may provide support services including the conduct of on-site inspections, approval of requisitions for payment, coordination of periodic (*e.g.* weekly) project meetings, and documentation of contractor work. In my experience, architecture/engineering costs are in the range of 10 percent. Construction of municipal projects usually require 10 percent for architect/design services. The 5 percent used by LECG is biased low given the very preliminary (conceptual) nature of the plan devised by Werner.

Construction Management. LECG, as a consequence of relying on Werner, has neglected the need for a general contractor and its costs for mobilization, direct site supervision, home office overheads and other costs and profit. A reasonable range for these costs is 5 to 15 percent of the total construction cost, depending on the size of the project.

Project Management. Overall management of a remedial project may be assigned to the U. S. Army Corps of Engineers, or an equivalent organization. Their responsibility includes planning, reporting, independent evaluation of work, community relations, and contract administration.

Based on my experience a range of 5 to 10 percent of the total construction cost is appropriate for estimation.

Technical Support. Applied to annual O&M costs, a contractor may be hired to provide technical support to on-going activities. This work may include monitoring activities, sampling and analysis, preparing periodic reports, and updating operating manuals, if applicable. Based upon my experience, an allowance of 10 to 20 percent of O&M costs should be included for this type of support.

The factors described in the preceding paragraphs must be included in any project cost estimate. Yet, LECG used a minimal factor of 5 percent for indirect costs in their analysis for the Mining Companies' remedial alternative.

Contingency

LECG used Werner's 2004 cost estimate, but added 10 percent for "bid contingency." As noted above, Werner acknowledged that he only prepared a conceptual plan at best. Given the bases upon which Werner estimated the costs, a 10 percent contingency is clearly inadequate. In applying only a 10 percent "bid contingency," LECG assumed that the remedy proposed by the Mining Companies was well defined in terms of engineering detail, plans and specifications, a notion that is not consistent with Werner's description of his work.

Another component of the overall contingency is a "scope contingency." Werner has postulated a remedial plan of undefined cleanup goals, but LECG has not provided a contingency to account for uncertainty related to the scope of the project.

Even when a bid is based on detailed drawings and specifications documents, there are unforseen costs during construction which may result in "change orders". In my experience even ***in a well defined and executed project, the change orders may be in the range of 5 percent.*** In light of all of the above and my own personal experience, the 30 percent used by EPA and its consultants for scope and design contingency in its estimates is more appropriate (and may even be low for

Werner's estimate). Accordingly, LECG, using Werner's estimate, have underestimated the cost contingency.

Summary of Indirect Construction Costs

An appropriate methodology for estimating the remedial costs at Coeur d'Alene[17] is compared with Werner's approach in Table 2. The table shows that Werner's total estimated construction cost is only 15 percent higher than the estimated construction cost, while using standard cost estimation methodology it should be closer 69 percent higher. Thus the comparison in Table 2 shows that LECG has significantly underestimated the construction costs for the remedial alternative proposed by the Mining Companies by about 47 percent.

TABLE 2
COMPARISON OF METHODOLOGIES FOR ESTIMATING TOTAL CONSTRUCTION COSTS

	Item	LECG	LECG	Ammann	Ammann
1	Construction Cost Estimate		$100		$100
2	Remedial Engineering [% of (1)]	5%	$5	10%	$10
3	Subtotal		$105		$110
4	Construction Management [% of (1)]	0%	$0	10%	$10
5	Subtotal		$105		$120
6	Project Management [% of (1)]	0%	$0	10%	$10
7	Subtotal		$105		$130
8	Contingency [% of (7)]	10%	$11	30%	$39
9	Total		$116		$169

[17] This methodology for determining estimation factors is consistent with the EPA Guidance Document. See "A Guide to Developing and Documenting Cost Estimates During the Feasibility Study", EPA Document No. 540-R-00-002. Prepared by the U.S. Army Corps of Engineers and the EPA Office of Emergency Response, July 2000, pp. 5-13, 5-14.

LECG OVERSTATES THE LIKELIHOOD THAT EPA WILL ADOPT A REMEDIAL ALTERNATIVE IT HAS ALREADY REJECTED

The decision analysis technique for estimating future environmental costs is, as cited LECG,[18] is a technique supported by the relevant ASTM International standard.[19] The technique is a means for capturing a reasonable range of alternatives to quantify the major uncertainties regarding future costs. However, it is possible to mask unreasonable assertions within this framework.

UPPER BASIN

LECG outlined several reasons why the authors of the LECG Report believe there is a 60 percent probability that the Mining Companies' Plan will be implemented in the Upper Basin rather than the 2002 ROD and the comprehensive plan developed by EPA. Some of these arguments are discussed in the following section and contradict the reality at the Site.

1. *Upstream to downstream source control is standard engineering practice.*[20]

The Grandinetti Report describes EPA's comprehensive plan in which source control will precede the remedial work downstream. Also, the cash flows in my expert report show source control measures in the Upper Basin precede remedial activity in the Lower Basin. So the Mining Companies' Plan would not appear to be an advantage on this issue.

2. *"…site characterization 'did not adequately address groundwater.…"*[21]

It is not clear that Werner included any surface or groundwater collection or treatment in the Upper Basin, particularly in Canyon Creek and Ninemile Creek. EPA has included in its comprehensive plan the treatment of groundwater as well as surface water.

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[18] Expert Report of Jeffrey Zelikson and Richard Lane White on Behalf of ASARCO, LLC, May 4, 2007.

[19] ASTM Standard E2137-06, "Standard Guide for Estimating Monetary Costs and Liabilities for Environmental Matters."

[20] LECG Report, p. 35.

[21] LECG Report, p. 35.

3. ***"…nor does the Interim ROD take into account that a major portion of the zinc in the lower basin results from groundwater seepage through the Box."***[22]

It is my understanding that apart from OU 3, EPA plans to address groundwater issues in the Box. It is unlikely that groundwater collection and treatment or isolation in the Box will, in itself, be sufficient to achieve the goal of reducing the mass flow of zinc in the Lower Basin and the Spokane River. LECG has not referenced an analysis prepared by the Mining Companies that demonstrates how the goal for reduction of soluble zinc in the Coeur d'Alene River can be achieved by Werner's proposed plan.

4. ***"Employing the cleanup strategy in the Upper Basin as represented in the alternative remedy would stabilize the sources of contaminants upstream of the Box, leaving the Box as the only remaining area that contributes substantial amounts of dissolved metals to the groundwater."***[23]

This is a far-reaching argument since Werner acknowledged in his 2004 expert report that his is only a preliminary plan, as noted above. Further LECG has not presented any backup analysis to support this conclusion. And, Werner, it appears, has not included any groundwater collection and treatment in his conceptual design for the Upper Basin.

With appropriate adjustments made to the Werner's construction cost estimates and the extension of O&M costs from 30 to 100 years, the costs for the Mining Companies' alternative plan are shown in Table 3. And with further engineering review and analysis, it is highly likely that the scope of the Mining Companies' Plan will increase significantly.

The cost of the remedial plan by the Mining Companies is compared with the present value of the Interim ROD for the Upper Basin in Table 3. The cost for the Upper Basin in the ROD is $61.9 in 2007 dollars. When Werner's costs are escalated to 2007 dollars, construction is implemented in the 2010 to 2012 time frame , O&M costs are calculated as described by LECG and are extended for 100 years, and an appropriate discount rate is used, the present value of the Mining

[22] LECG Report, pp. 35-36.

[23] LECG Report, p. 36.

Companies' Plan is more than $250 million. This compares with LECG's estimate of $156 million.[24]

TABLE 3
A COMPARISON OF ESTIMATED REMEDIAL COSTS IN THE UPPER BASIN

Source Area	Interim ROD (Adjusted to 2007 Dollars)	Mining Co. Estimate (2004 Dollars)	Present Value Mining Company Cost (2007 Dollars) [1]
Upper South Fork	$8,500,000	$11,500,000	$45,400,000
Canyon Creek	$17,000,000	$40,100,000	$96,800,000
Ninemile Creek	$30,000,000	$16,700,000	$54,700,000
Mid-South Fork	$6,400,000	$17,900,000	$56,900,000
	$61,900,000	$86,200,000	$253,800,000

[1] Adjusted by the 47 percent described previously. O&M calculated for 100 years using a discount rate as described by M. A. Maniatis. Construction carried out in 2010 to 2012, with O&M until 2106.

LOWER BASIN

Continuing the pattern of assigning high probabilities to unreasonable alternatives, LECG has assumed that there is a 70 percent probability that a remedial alternative proposed by the Mining Companies will be implemented by EPA in the Lower Basin. According to this plan, future remedial activities in the Lower Basin are based on limited remedial activities as defined by Werner, whereas EPA's comprehensive plan includes extensive excavation of river sediments, restoration of river banks and riparian areas, and work in the lateral lakes. As explained in the Grandinetti Report, EPA determined that to protect human health and the environment, and to comply with ARARs, extensive work is required in the Lower Basin. EPA has determined that the alternative proposed by the Mining Companies does not meet that goal. However, LECG makes assertions that seem based more on speculation and hope than research and reality.

[24] LECG Report, Attachment A, Table 4.

1. *It is unlikely given the breadth of contamination in the Lower Basin depositional area that water quality standards can ever be met .*[25]

EPA believes that they can make significant improvements to the water quality and to the ecology by their comprehensive remedial plan.[26] It does not appear that the mining companies have provided an analysis to support their position.

2. *USEPA recognizes the fact that the ROD can and may be changed.*[27]

EPA has already rejected the plan by the Mining Companies as being inadequate to achieve the cleanup requirements.

3. *Extensive dredging in the Lower Basin as proposed in the ROD will cause additional harm.*[28]

Even the mining companies have proposed the dredging/excavation of hotspots.[29] Though perhaps on a smaller scale, they would also create the similar types of risks. As noted in EPA's comprehensive plan, pilot studies would be conducted for five years prior to full scale operation to develop technology/procedures to minimize risks to public health and the environment. This approach would be in accordance with "adaptive management".

While LECG has noted potential problems with large scale dredging/excavation (on a scale equivalent to prior dredging by the Mining Companies), they have not provided a study or analysis which quantifies the risks and shows that they outweigh the benefits. Furthermore, the Werner cost analysis includes the dredging of approximately 500,000 cubic yards of contaminated soils and sediments.

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[25] LECG Report, p. 42.

[26] Grandinetti Report.

[27] LECG Report, p. 43.

[28] LECG Report, pp. 43-44.

[29] Werner Report, Appendix C-2.

4. ***The likelihood of recontamination of sediments is high if the interim ROD remedy is implemented.***[30]

One of the concerns expressed in the LECG Report is the inefficiency of dredging/excavation of contaminated materials because of re-contamination from upstream sources. But the schedule for EPA's comprehensive plan includes upstream source control before remediation in the Lower Basin.

LECG shows a pattern of favoring low cost alternatives without assigning reasonable probabilities to the likelihood of actions favored by EPA, the organization that makes the decision at the Site. The arguments they use to justify their choices are often unsupported or speculative.

LECG HAS UNDERVALUED OR NEGLECTED TO PUT FORTH ESTIMATES FOR SEVERAL OTHER COSTS CATEGORIES THAT ARE PART OF THE COMPREHENSIVE REMEDY SELECTED BY EPA

LECG has underestimated, or not included, additional costs that are appropriately part of a comprehensive remedy, as described in my expert report.[31] For example, since LECG relies on Werner's for the cost estimates for the Lower Basin according to the plan proposed by the Mining Companies, it appears they did not include costs for the remediation of the ***Spokane River*** with other costs for the Lower Basin in their proposed remedy.

In addition, EPA must anticipate the low probability that it may, in future years, have to assume responsibility for the ***Lake Management Plan***. EPA has determined a net present value (2008 dollars) of approximately $1.4 million.

EPA must conduct ***five-year reviews*** for the entire site for at least 100 years. However, LECG underestimated the base cost per review at $241,825, compared to EPA's projection of $1.5 million per review (a value based on actual past costs at the Site).

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[30] LECG Report, p. 47.

[31] Ammann Report, pp.22 -23.

Both the EPA and the State of Idaho believe that on the basis of historic information, their respective costs are equivalent to 2.3 percent of all remedial expenditures and are appropriately included for ***governmental and agency oversight***. On this basis, the present value of the agency oversight costs would be around $11.5 million over the 100 years for the remedial program. Zelikson and White calculated a present value for agency oversight at $5.44 million.[32]

LECG does not include estimates for ***EPA indirect costs***. Indirect costs are part of any comprehensive estimate. If EPA were to manage all of the remedial activities at the Coeur d'Alene Superfund Site in the future, an indirect charge of 33.49 percent would be allocated to all contractor and subcontractor costs.

LECG USES A DISCOUNT RATE THAT IS TOO HIGH

The expert report of M. Alexis Maniatis dated May 4, 2007 states that the appropriate discount rate to determine the present value of future expenditures is the rate on U.S. government securities of corresponding duration, which will yield the appropriate future dollar amount as remedial funds are required in the future at this site.[33] LECG, however, uses a rate that is higher than the appropriate rates, understating the present value of the future remediation costs and leaving the EPA at risk for having insufficient funds to complete the activities specified in any plan.

Mr. Maniatis also has presented additional information in his Proffer of Direct Testimony, dated August 1, 2007. This document and accompanying demonstratives summarize why the much higher rate is not appropriate. I rely on his conclusions.

As stated in this report, LECG uses a 7 percent real rate (and an approximately 9.5 percent nominal rate), whereas Mr. Maniatis' real rate is approximately 2.5 percent (with nominal rate around 5 percent depending on the year of discounting).

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[32] LECG Report, Attachment A, Table 1.

[33] M. Alexis Maniatis, Expert Report Concerning Estimation of the Present Value of Expected Remediation Costs in the ASARCO LLC Chapter 11 Bankruptcy Matter, Case No. 05-21207, May 4, 2007.

SUMMARY

LECG has presented estimates for the Coeur d'Alene Superfund Site that undervalue future costs. Further the activities they propose have questionable validity in light of the fact they base some of their estimates on another individual's preliminary work. LECG has underestimated the present value for future remedial responsibilities in OU 1 by limiting the length of time for the ICP program to 30 years instead of 100 years and by not including the expansion of the Page Pond that is required to accommodate future private and commercial development in the region, a region that is growing rapidly.

LECG agrees with the scope of the Human Health Program, but they have underestimated the present value of its future costs because the scope of the program has increased, annual and other periodic costs must run in perpetuity (or at least 100 years), and by using an inappropriate discount factor. Their calculated present value is about $60 million low.

LECG has assumed that there is a high probability that the EPA will reduce the scope of the Ecological Remedy, adopt an alternative proposed by the Mining Companies and thereby reduce costs significantly. Their estimated cost of the proposed remedial alternative is flawed and is approximately understated by about $100 million. But since the proposed alternative has been rejected by EPA in the 2002 Record of Decision, it seems to be highly unlikely that EPA will reduce the scope of the comprehensive remedy, based largely on Alternative 3 on the 2002 ROD and Feasibility Study.

While I have not calculated all of the short-falls in the LECG method, I have shown they are numerous and the bases largely without foundation.

SUPPLEMENTAL ANALYSIS

As noted in my expert report,[34] an expansion of the Page Repository will be required to receive contaminated soils and materials as private and commercial development proceeds in the Coeur d'Alene Valley in the future. In my report, I calculated the present value of the expansion and continued O&M at $41.2 million in present value year 2008 dollars, based on a report by TerraGraphics Environmental Engineering, Inc. This consultant to the Idaho Department of Environmental Quality has revised their estimate of required future capacity for the expansion. Making the adjustments for reduced future capacity of the Page Repository, the calculated present value for the Page Pond Repository is **$34 million** in present value year 2008 dollars. See Appendix B for an updated version of Table D-3 from my original report.

Further, I have been asked by the United States Department of Justice to calculated the allocation of this revised estimate between populated (OU 1) and non-populated (OU 2) areas at the Bunker Hill Box. I use the following assumptions in this calculation:

- For activities Page Repository, the estimated allocation between the populated and non-populated areas is 73 percent and 27 percent respectively.[35]
- For the ICP program, the estimated allocation between the populated and non-populated areas is 80 percent and 20 percent respectively.[36]
- Five-year review costs follow OU 1 or 100 percent for the populated area.[37]
- Oversight costs follow OU 1 or 100 percent for the populated area.

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[34] "Expert Report Concerning Future Costs of The Bunker Hill Box In The ASARCO LLC Chapter 11 Bankruptcy Matter, Case No. 05-21207," Paul R. Ammann, June 15, 2007.

[35] Amended Declaration of Robert Hanson with Regard to The Bunker Hill Mining and Metallurgical Complex Superfund Site, with Exhibits, August 9, 2007.

[36] Electronic Message from Anne MacCauley of EPA to David Dain of United States Department of Justice Regarding Updated Bunker Hill Page Repository Cost Estimate, August 3, 2007.

[37] Declaration of Anne L. McCauley with Regard to The Bunker Hill Mining and Metallurgical Complex Superfund Site, June 2007.

Table 4 summarizes the allocation in present value year 2008 dollars, showing that $26.6 million or about 78 percent of the future costs are associated with activities in the populated area, with $7,353,975 or 22 percent for the non-populated area

TABLE 4
ALLOCATION OF ESTIMATED FUTURE COSTS AT THE COEUR D'ALENE BUNKER HILL BOX BETWEEN POPULATED AND NON-POPULATED AREAS

Cost Component	Populated Area	Non-Populated Area	Total
Page Repository	$12,248,198	$4,530,155	$16,778,353
Institutional Control Plan	$11,295,277	$2,823,819	$14,119,096
5-Year Review	$2,944,335	$0	$2,944,335
Oversight	$129,394	$0	$129,394
Total	$26,617,203	$7,353,975	$33,971,178

APPENDIX A

Documents Considered

APPENDIX A

Documents Considered by Paul Amman

Title	Author	Date
Region 10 Superfund: Bunker Hill / Coeur d'Alene Basin	EPA Region 10	N/A
FY02-FY04 Clean Water Act Grants - Excerpts from Coeur D'Alene Tasks in Annual Work Plans - 2EPASE001123 - 2EPASE001130	Unknown	N/A
Estimated Total Party Hours - July - June - 2EPASE001131 - 2EPASE001144	Unknown	N/A
Region 10 Indirect Cost Rates - 2EPASE001222 - 2EPASE001223	Unknown	N/A
Historical Costs Used to Determine EPA Percentage [Electronic File Name: pic26031]	Unknown	N/A
Bunker Hill/Coeur d'Alene Superfund Project - Analytical Tools to Assess Benefits of Cleanup Alternatives on Surface Water Quality in the Future - Strawman Concept and Proposal - 2EPSEA001443 - 2ESPEA001450	Unknown	N/A
River Segment Loading - 2ESPEA001451 - 2ESPEA001451	Unknown	N/A
CH2M Hill Report	CH2M Hill	2001/2002
Bunker Hill Consent Decree (1994 Upstream Mining Consent Decree) - 2EPASE000656 - 2EPASE000836	US DOJ	02/11/1994
Coeur d'Alene Lake Management Plan - 2EPASE000838 - 2EPASE001122	Coeur d'Alene Tribe Clean Lakes Coordinating Council Idaho Division of Environmental Quality	10/00/1996
Review of Proposed Superfund Indirect Rates Methodology	KPMG	09/00/1999
GAO Review of EPA Superfund Indirect Cost Accounting Methodology	Calbom, Linda / GAO	12/22/1999
Draft - Technical Memorandum No. 1 Candidate Alternatives and Typical Conceptual Designs - Coeur d'Alene River Basin Feasibility Study - 2ESPEA001452 - 2ESPEA001748	URS Greiner CH2M Hill	02/00/2000

APPENDIX A

Documents Considered by Paul Amman

Title	Author	Date
Accounting for Indirect Costs Associated with Superfund Site-Specific Activities	Dillon, Joseph / EPA	05/26/2000
A Guide To Developing and Documenting Cost Estimates During the Feasibility Study, US Environmental Protection Agency, EPA 540-R-00-002	EPA	07/00/2000
Basin Draft Tech Memo 3	URS	07/06/2000
First Five Year Review of the Non-Populated Area Operable Unit Bunker Hill Mining and Metallurgical Complex - 2EPASE001274 - 2EPASE001442	USEPA Region 10	09/28/2000
United States Motion for Temporary Restraining Order and Memorandum in Support	DOJ	08/09/2002
ROD - Responsiveness Summary	URS/EPA	09/00/2002
ROD/R10-02/032 2002 OU 03	EPA	09/12/2002
BHISS ICP Cost Estimate	McCurdy, Michael / TerraGraphics	11/01/2002
ICP Cost Estimate – General ICP Breakout from November 1, 2002 Estimate	McCurdy, Michael / TerraGraphics	11/13/2002
Declaration of Robert Hanson	Hanson, Robert / Idaho Department of Environmental Quality	04/25/2003
Superfund Lead-Contaminated Residential Sites Handbook	EPA	08/00/2003
Expert Report of Bradford S. Cushing - DFEXRPT000356 - DFEXRPT000384	Cushing, Bradford / Applied Environmental Management	08/00/2004
Federal Lands Damage Calculations	Stratus Consulting Inter-Fluve Inc.	08/20/2004
Summary of Damages Calculations: Coeur d'Alene Basin - Natural Resource Damage Assessment - Summary Report	Stratus Consulting	08/20/2004
RestorePlan	Ridolfi Inc. Falter, Michael / Aquatic Environmental	08/20/2004

APPENDIX A

Documents Considered by Paul Amman

Title	Author	Date
AquaticCalc	Stratus Consulting Inter-Fluve Inc. Rahel, Frank / U. Wyoming	08/20/2004
Tundra Swan Injury Assessment - Lower Coeur d'Alene Basin	Trost, Robert	08/23/2004
Expert Opinion of John C. Butler, III - DFEXRPT000054 - DFEXRPT000354	Butler, John / LECG	08/24/2004
Expert Report of Steven Werner - DFEXRPT000877 - DFEXRPT001017	Werner, Steven / NewFields Boulder	08/24/2004
Rebuttal Report of Bradford S. Cushing - DFEXRPT001450 - DFEXRPT001460	Cushing, Bradford / Applied Environmental Management	09/00/2004
Superfund Actual Indirect Cost Rates for Fiscal Years (FY) 2002 and 2003 - 2EPASE000008 - 2EPASE000012	McAllister, Lorna	09/01/2004
LeJeune_Rebuttal092304	LeJeune, Katherine / Stratus Consulting	09/23/2004
Supplemental Expert Opinion of John C. Butler, III - DFEXRPT001185 - DFEXRPT001449	Butler, John / LECG	09/24/2004
Rebuttal Report of Steven Werner - DFEXRPT001589 - DFEXRPT001608	Werner, Steven / NewFields Boulder	09/24/2004
TROST_TundraExpertReport101304	Trost, Robert / US Fish & Wildlife Kern, John / Kern Statistical Services	10/13/2004
Lipton_Rebuttal101504	Lipton, Joshua / Stratus Consulting	10/15/2004
LeJeune_Rebuttal101504	LeJeune, Katherine / Stratus Consulting	10/15/2004
Rahel_Rebuttal101504	Rahel, Frank / U Wyoming	10/15/2004
Koonce_Rebuttal101504	Koonce, Greg / Inter-Fluve	10/15/2004
Ridolfi101504	Ridolfi Inc.	10/15/2004
Chapman_Rebuttal101504	Chapman, David / Stratus Consulting	10/15/2004

APPENDIX A

Documents Considered by Paul Amman

Title	Author	Date
Lipton_Supplemental110904	Lipton, Joshua / Stratus Consulting LeJeune, Katherine / Stratus Chapman, David / Stratus	11/09/2004
Baseline and Historic Depositional Rates and Lead Concentrations, Floodplain Sediments, Lower Coeur d'Alene River, Idaho	Bookstrohm, Arthur / USGS	12/11/2004
Executive Summary - Coeur d'Alene River Wildlife Management Area - Public Use Survey - 2004-2005 - 2EPASE001145 - 2EPASE001156	Unknown	00/00/2005
Lessons from the Coeur d'Alene River Basin	National Academies of Sciences	00/00/2005
Brattle Group Model Expert Report	DeHoff, Thomas / EPA	06/00/2005
Second Five-Year Review Report For the Bunker Hill Mining and Metallurgical Complex Superfund Site - 2EPASE000036 - 2EPASE000655	US EPA	10/24/2005
EPA Project Report - 01-November-2005 through 01-December-2005 - 2EPASE000031 - 2EPASE000035	US Army Corps of Engineers, Seattle District	12/19/2005
Supplemental Proof of Claim of the United States on Behalf of the United States Department of the Interior and the Department of Agriculture, the Against Asarco, LLC	DOJ	07/28/2006
Supplemental Proof of Claim of the United States on Behalf of the United States Environmental Protection Agency, the Department of Agriculture, the Department of the Interior, and the United States Section of the International Boundary and Water Commission Against Asarco, LLC	DOJ	07/28/2006
Scorpios - Superfund Total Cost Report - 2EPASE000007 - 2EPASE000007	Unknown	10/23/2006
Application for Authorization to Hire LECG, LLC as Environmental Consultant to the Debtor	Baker Botts Jordan Hyden	11/15/2006

APPENDIX A

Documents Considered by Paul Amman

Title	Author	Date
Final Field Report, Washington Recreation Sites, Starr Road, Appendix 3 and USAC Costs - 2EPASE001224 - 2EPASE001248	Waste Management, Inc.	11/16/2006
Estimated Cleanup Costs for the Coeur d'Alene Basin Costs Escalated to November 2006 and Ninemile Creek and Pine Creek Costs Excluded	URS	11/17/2006
Superfund Actual Indirect Cost Rates for FY 2004	EPA	01/31/2007
FY 1990 - 2004 Actual Indirect Cost Rates	EPA	01/31/2007
Contract cost docs ASW 2006	Whyms, Kelvin / EPA	02/23/2007
Contract cost docs ER 2005	Whyms, Kelvin	02/23/2007
Case Management Order Establishing Procedures for Estimation of Asarco LLC's Environmental Liabilities and Authorizing the Filing of Omnibus Objections to Environmental Claims	Schmidt, Richard / US Bankruptcy Judge	03/23/2007
U.S. v. Asarco, Inc. Summary of Costs Incurred by the Department of Justice/Environment and Natural Resources Division [Electronic File Name: 128L at1206 and 307]	DOJ	03/31/2007
Costs per [Electronic File Name: US v. Asarco - Summary 061507]	Wright, Wiley / Rubino & McGeehin Consulting	03/31/2007
Final Field Report, Washington Recreation Sites, Starr Road - 2EPASE001249 - 2EPASE001273	US Army Corps of Engineers, Seattle District	04/00/2007
Itemized Cost Summary - Coeur d'Alene - Five Year Review - 2EPASE000016 - 2EPASE000030	Unknown	04/09/2007
Itemized Cost Summary - Coeur d'Alene - 2EPASE000013 - 2EPASE000015	Unknown	04/09/2007
Update on General Annual ACP Cost for the Box. - 2EPASE001771 - 2EPASE001772	McCurdy, Michael / TerraGraphics	04/13/2007
Box ICP Annual Estimate - 2EPASE000837 - 2EPASE000837	Unknown	04/14/2007

APPENDIX A

Documents Considered by Paul Amman

Title	Author	Date
ICP Cost Update - 2EPASE001773 - 2EPASE001773	Unknown	04/16/2007
Construction/Index Cost Index History	Engineering News Record	04/19/2007
Follow-up Information for Brattle - Coeur d'Alene Basin - 2EPASE000001 - 2EPASE000006	Unknown	04/27/2007
Coeur d'Alene Lake Monitoring Program - Quality Assurance Management Plan - 2EPASE001157 - 2EPASE001221	Coeur d'Alene Tribe Idaho Division of Environmental Quality	05/08/2007
Official Environmental Estimation Service List - Case Management Order Exhibit B - Effective April 24, 2007	United States Bankruptcy Court for the Southern District of Texas Corpus Christi Division	05/15/2007
Coeur d'Alene Basin RD/RA - Response Costs from 09/01/2003 through 12/31/2006 with Interest from 03/22/1996 through 12/31/2006 - 2EPSEC001496 - 2EPSEC002337	EPA	05/25/2007
CD'A BSN-Frisco Mine/Mill Shoshone County - Response Costs from 01/01/2007 through 03/31/2007 with Interest from 03/22/1996 through 03/31/2007 - 2EPSEC002338 - 2EPSEC002346	EPA	05/25/2007
CD'A BSN-Frisco Mine/Mill Shoshone County - Response Costs from 09/01/2003 through 12/31/2006 with Interest from 03/22/1996 through 12/31/2006 - 2EPSEC002347 - 2EPSEC002354	EPA	05/25/2007
CD'A BSN - Osburn Site Shoshone County - Response Costs from 01/01/2007 through 03/31/2007 with Interest from 03/22/1996 through 03/31/2007 - 2EPSEC002355 - 2EPSEC002363	EPA	05/25/2007
CD'A BSN - Osburn Site Shoshone County - Response Costs from 09/01/2003 through 12/31/2006 with Interest from 03/22/1996 through 12/31/2006 - 2EPSEC002364 - 2EPSEC002373	EPA	05/25/2007

APPENDIX A

Documents Considered by Paul Amman

Title	Author	Date
Coeur d'Alene Basin RD/RA - Response Costs from 01/01/2007 through 03/31/2007 with Interest from 03/22/1996 through 03/31/2007 - 2EPSEC001413 - 2EPSEC001495	EPA	05/25/2007
CD'A Basin - Yard RMVL, Wallace/Osborn ID Site ID = 10 4Q - Response Costs from 09/01/2003 through 12/31/2006 with Interest from 03/22/1996 through 12/31/2006 - 2EPSEC002383 - 2EPSEC002402	EPA	05/25/2007
CD'A Basin - Dayrock Mine, Wallace ID. Site ID = 10 7H - Response Costs from 01/01/2007 through 03/31/2007 with Interest from 03/22/1996 through 03/31/2007 - 2EPSEC002403 - 2EPSEC002411	EPA	05/25/2007
CD'A Basin - Dayrock Mine, Wallace ID. Site ID = 10 7H - Response Costs from 09/01/2003 through 12/31/2006 with Interest from 03/22/1996 through 12/31/2007 - 2EPSEC002412 - 2EPSEC002421	EPA	05/25/2007
CD'A Basin, Kootenai County, ID. Site ID = 10 M6 - Response Costs from 01/01/2007 through 03/31/2007 with Interest from 03/22/1996 through 03/31/2007 - 2EPSEC002422 - 2EPSEC002431	EPA	05/25/2007
CD'A Basin, Kootenai County, ID. Site ID = 10 M6 - Response Costs from 09/01/2003 through 12/31/2006 with Interest from 03/22/1996 through 12/31/2006 - 2EPSEC002432 - 2EPSEC002450	EPA	05/25/2007
Coeur d'Alene Success Mine, Wallace, ID - Site ID = 10 S7 - Response Costs from 01/01/2007 through 03/31/2007 with Interest from 03/22/1996 through 03/31/2007 - 2EPSEC002451 - 2EPSEC002459	EPA	05/25/2007
Coeur d'Alene Success Mine, Wallace, ID - Site ID = 10 S7 - Response Costs from 09/01/2003 through 12/31/2006 with Interest from 03/22/1996 through 12/31/2006 - 2EPSEC002460 - 2EPSEC002469	EPA	05/25/2007

APPENDIX A

Documents Considered by Paul Amman

Title	Author	Date
CD'A Basin - Yard RMVL, Wallace/Osborn ID Site ID = 10 4Q - Response Costs from 01/01/2007 through 03/31/2007 with Interest from 03/22/1996 through 03/31/2007 - 2EPSEC002374 - 2EPSEC002382	EPA	05/25/2007
Declaration of Anne L. McCauley with Regard to the Bunker Hill Mining and Metallurgical Complex Superfund Site [Electronic File Name: mccauley]	McCauley, Anne / EPA	06/00/2007
Page Repository Expansion Cost Sensitivity Analysis - 2EPASE001768 - 2EPASE001770	Forseth , Derek / TerraGraphics McCracken, Dan / TerraGraphics	06/01/2007
Summary of Page Repository Expansion Cost - 2EPASE001752 - 2EPASE001767	Forseth , Derek / TerraGraphics McCracken, Dan / TerraGraphics	06/01/2007
Estimated Cleanup Costs for the Coeur d'Alene Basin Costs Escalated to December 2006 and Pine Creek Costs Excluded Draft as of June 8, 2007 [Electronic File Name: CdA cost update memo 6-8-07] 2EPASE001774 - 2EPASE001842	URS	06/08/2007
Construction/Index Cost Index History	Engineering News Record	06/11/2007
Expert Report of William M. Kime Concerning Certain Costs o the U.S. Department of Justice Environment and Natural Resources Division [Electronic File Name: Final Report61207]	Kime, William / Rubino & McGeehin Consulting	06/12/2007
Expert Report of William M. Kime Concerning Certain Costs of the U.S. Department of Justice Environment and Natural Resources Division [Electronic File Name: Kime Final 061307.pdf]	Kime, William / Rubino & McGeehin Consulting	06/13/2007
Declaration of Robert Hanson with Regard to the Bunker Hill Mining and Metallurgical Complex Superfund Site [Electronic File Name: #963594-v1-ddsubDocument6142007]	Hanson, Robert / Idaho Department of Environmental Quality	06/14/2007

APPENDIX A

Documents Considered by Paul Amman

Title	Author	Date
Report of the United States Environmental Protection Agency's Comprehensive Cleanup Approach for the Coeur d'Alene Basin [Electronic File Name: Grandinetti ExpRpt 06_14_07.pdf]	Grandinetti, Cami / EPA	06/14/2007
In re: Asarco LLC, et al., Debtors Case No. 05-21207 Expert Accounting Report - Wiley R. Wright, III CPA [Electronic File Name: Wright FINAL 06.14.07.pdf]	Wright, Wiley / Rubino & McGeehin Consulting	06/14/2007
Debtor's Disclosure Concerning Coeur d'Alene (Box and Basin), Idaho Site [Electronic File Name: CDA Initial Disclosure.pdf]	Baker Botts Jordan Hyden Womble Culbreath & Holzer	06/15/2007
Supplemental Expert Report of Jeffrey Zelickson and Richard Lane White on Behalf of ASARCO LLC [Electronic File Name: Overview Report Addendum 6.15.07.pdf]	Zelikson, Jeffrey / LECG & White, Richard / LECG	06/15/2007
Appendix B-8 – Coeur d'Alene (Box and Basin), Idaho Site [Electronic File Name: Coeur dAlene Complete Report 6.15.07.pdf]	Zelikson, Jeffrey / LECG & White, Richard / LECG	06/15/2007
United States' Initial Submission for Operable Unit #3 of the Bunker Hill Superfund Facility/Coeur d'Alene Basin Superfund Site ("Basin") Re: Estimation Hearing [Electronic File Name: Basin Disclosure.pdf]	US DOJ	06/15/2007
Expert Report of Joshua Lipton, PhD Asarco LLC Chapter 11 Bankruptcy Case No. 05-21207 Coeur d'Alene Basin, Idaho [Electronic File Name: Lipton Expert.Report 06_15_07.pdf]	Lipton, Joshua / Stratus Consulting	06/15/2007
Asarco Chapter 11 Bankruptcy Case No. 05-21207 Expert report of Fredric L. Quivik, PhD. [Electronic File Name: Quivik ExpRpt 06_15_07.pdf]	Quivik, Fredric	06/15/2007
Expert Report of Robert E. Trost, PhD ASARCO LLC Chapter 11 Bankruptcy Case No. 05-21207 Coeur-d'Alene Basin, Idaho [Electronic File Name: Trost 06 15 07t.pdf]	Trost, Robert / USFWS-DMBM	06/15/2007

APPENDIX A

Documents Considered by Paul Amman

Title	Author	Date
Expert Report of Robert Powell, William Desvouges and Environ International Corporation on Behalf of Asarco Corporation [Electronic File Name: COEUR1.PDF]	Powell, Robert / Environ, Desvousges, William / W.H. Desvousges & Associates	06/15/2007
Asarco Incorporated 's Disclosure Concerning Band 2: Coeur d'Alene Basic Site [Electronic File Name: COEUR2.PDF]	Milbank Tweed Hadley & McCloy Haynes & Boone	06/15/2007
Service List Schedule ! General Environmental Notice Parties [Electronic File Name: COEUR3.PDF]	Milbank Tweed Hadley & McCloy Haynes & Boone	06/15/2007
Electronic Message from Anne MacCauley of EPA to David Dain of DOJ Regarding Updated Bunker Hill Page Repository Cost Estimate	McCauley, Anne L. / EPA	08/03/2007
Page Repository Expansion Cost [Electronic File Name: Bunker Hill Box ICP Page Repository Cost Estimate 8-3-07]	TerraGraphics	08/03/2007
Amended Declaration of Robert Hanson with Regard to The Bunker Hill Mining and Metallurgical Complex Superfund Site, with Exhibits	Hanson, Robert / IDEQ	08/09/2007

APPENDIX B

Updated Cost Table

(Revised Appendix D table from 6/15/07 Expert Report)

Table D-3: Revised Summary of Estimated Future Costs -- Coeur d'Alene Bunker Hill Box

Activity	Estimate Year	Adjustment Factor	Estimation Factor	Source	Total	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
						1	2	3	4	5	6	7	8	9	10	11	12	13
Inflation Factor						1.000	1.023	1.047	1.071	1.095	1.120	1.146	1.173	1.200	1.227	1.255	1.284	1.314
Discount Factor						1.047	1.000	0.955	0.917	0.878	0.845	0.802	0.763	0.726	0.690	0.656	0.623	0.589
Costs in Estimate Year's Dollars																		
Page Repository Construction Costs																		
Site Investigation and Eng. Design	2006			[1]	1,207,500	1,207,500	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	2006			[1]	3,761,724	-	3,761,724	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	2006			[1]	26,581,315	-	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498
Cell Open/Closure	2006			[1]	956,858	-	-	-	-	-	-	-	-	-	-	-	87,371	-
Final Cell Closure	2006			[1]	238,230	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs					32,745,627	1,207,500	4,030,222	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	355,869	268,498
Operations & Maintenance Costs																		
Annual O&M	2006			[1]	2,269,977	-	8,809	8,809	8,809	8,809	8,809	8,809	8,809	8,809	8,809	8,809	8,809	8,809
5-Year Review	2005		$361,606	[2]	7,232,120	-	-	-	361,606	-	-	-	-	361,606	-	-	-	-
Institutional Controls	2006			[3]	35,188,697	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887
Subtotal O&M Costs					44,690,794	351,887	360,696	360,696	722,302	360,696	360,696	360,696	360,696	722,302	360,696	360,696	360,696	360,696
EPA and State of Idaho Oversight	2007		0.00%	[2], [3]	125,000	62,500	62,500	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration			0.00%		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs					125,000	62,500	62,500	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs					77,561,421	1,621,887	4,453,418	629,194	990,800	629,194	629,194	629,194	629,194	990,800	629,194	629,194	716,565	629,194
EPA Indirect Costs			0.00%		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in Estimate Year's Dollars					77,561,421	1,621,887	4,453,418	629,194	990,800	629,194	629,194	629,194	629,194	990,800	629,194	629,194	716,565	629,194
Costs in Year 2007 Dollars																		
Page Repository Construction Costs																		
Site Investigation and Eng. Design	2007	1.024		[1]	1,236,788	1,236,788	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	2007	1.024		[1]	3,852,965	-	3,852,965	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	2007	1.024		[1]	27,226,044	-	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011
Cell Open/Closure	2007	1.024		[1]	980,066	-	-	-	-	-	-	-	-	-	-	-	89,490	-
Final Cell Closure	2007	1.024		[1]	244,008	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	2007				33,539,870	1,236,788	4,127,975	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	364,501	275,011
Operations & Maintenance Costs																		
Annual O&M	2007	1.024		[1]	2,325,035	-	9,023	9,023	9,023	9,023	9,023	9,023	9,023	9,023	9,023	9,023	9,023	9,023
5-Year Review	2007	1.066		[2]	7,710,959	-	-	-	385,548	-	-	-	-	385,548	-	-	-	-
Institutional Controls	2007	1.024		[3]	36,042,197	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422
Subtotal O&M Costs	2007				46,078,191	360,422	369,445	369,445	754,993	369,445	369,445	369,445	369,445	754,993	369,445	369,445	369,445	369,445
EPA and State of Idaho Oversight	2007	1.000	0.00%	[2], [3]	125,000	62,500	62,500	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration	2007		0.00%		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs	2007				125,000	62,500	62,500	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs	2007				79,743,061	1,659,710	4,559,920	644,455	1,030,003	644,455	644,455	644,455	644,455	1,030,003	644,455	644,455	733,946	644,455
EPA Indirect Costs	2007		0.00%		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in Year 2007 Dollars	2007				79,743,061	1,659,710	4,559,920	644,455	1,030,003	644,455	644,455	644,455	644,455	1,030,003	644,455	644,455	733,946	644,455
Costs in PV Year 2008 Dollars																		
Page Repository Construction Costs																		
Site Investigation and Eng. Design	2008			[1]	1,295,288	1,295,288	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	2008			[1]	3,941,583	-	3,941,583	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	2008			[1]	10,485,188	-	281,336	274,780	269,890	264,595	260,381	252,643	245,992	239,640	232,726	226,547	219,889	212,877
Cell Open/Closure	2008			[1]	348,515	-	-	-	-	-	-	-	-	-	-	-	71,553	-
Final Cell Closure	2008			[1]	22,005	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	2008				16,092,579	1,295,288	4,222,919	274,780	269,890	264,595	260,381	252,643	245,992	239,640	232,726	226,547	291,442	212,877
Operations & Maintenance Costs																		
Annual O&M	2008			[1]	685,774	-	9,230	9,015	8,855	8,681	8,543	8,289	8,071	7,862	7,635	7,433	7,214	6,984
5-Year Review	2008			[2]	2,944,335	-	-	-	378,369	-	-	-	-	335,960	-	-	-	-
Institutional Controls	2008			[3]	14,119,096	377,470	368,712	360,119	353,710	346,772	341,249	331,108	322,391	314,066	305,004	296,907	288,181	278,991
Subtotal O&M Costs	2008				17,749,205	377,470	377,942	369,134	740,934	355,452	349,791	339,397	330,462	657,888	312,640	304,340	295,395	285,975
EPA and State of Idaho Oversight	2008		0.00%	[2], [3]	129,394	65,456	63,938	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration	2008		0.00%		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs	2008				129,394	65,456	63,938	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs	2008				33,971,178	1,738,214	4,664,798	643,914	1,010,823	620,047	610,172	592,040	576,454	897,528	545,365	530,887	586,837	498,851
EPA Indirect Costs	2008		0.00%		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in PV Year 2008 Dollars	2008				33,971,178	1,738,214	4,664,798	643,914	1,010,823	620,047	610,172	592,040	576,454	897,528	545,365	530,887	586,837	498,851

Sources:

[1] Derek Forseth and Dan McCracken, "Summary of Page Repository Expansion Cost," TerraGraphics Environmental Engineering, Inc., August 3, 2007.

[2] Declaration of Anne L. McCauley with Regard to the Bunker Hill Mining and Metallurgical Complex Superfund Site, June 2007. The estimate of $55,000 for EPA oversight includes indirect costs.

[3] Declaration of Robert Hanson with Regard to the Bunker Hill Mining and Metallurgical Complex Superfund Site, June 2007. The oversight estimate is $70,000.

Table D-3: Revised Summary of Estimated Future Costs -- Coeur d'Alene Bunker Hill Box

Activity	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Inflation Factor	1.344	1.375	1.406	1.439	1.472	1.506	1.540	1.576	1.612	1.649	1.687	1.726	1.766	1.806	1.848	1.890	1.934
Discount Factor	0.557	0.528	0.502	0.478	0.454	0.432	0.412	0.393	0.376	0.360	0.345	0.334	0.321	0.307	0.296	0.281	0.264
Costs in Estimate Year's Dollars																	
Page Repository Construction Costs																	
Site Investigation and Eng. Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498
Cell Open/Closure	-	-	-	51,146	-	-	-	-	51,146	-	-	-	-	51,146	-	-	-
Final Cell Closure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	268,498	268,498	268,498	319,644	268,498	268,498	268,498	268,498	319,644	268,498	268,498	268,498	268,498	319,644	268,498	268,498	268,498
Operations & Maintenance Costs																	
Annual O&M	8,809	8,809	8,809	8,809	16,027	16,027	16,027	16,027	17,230	17,230	17,230	17,230	17,230	18,433	18,433	18,433	18,433
5-Year Review	361,606	-	-	-	-	361,606	-	-	-	-	361,606	-	-	-	-	361,606	-
Institutional Controls	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887
Subtotal O&M Costs	722,302	360,696	360,696	360,696	367,914	729,520	367,914	367,914	369,117	369,117	730,723	369,117	369,117	370,320	370,320	731,926	370,320
EPA and State of Idaho Oversight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs	990,800	629,194	629,194	680,340	636,412	998,018	636,412	636,412	688,761	637,615	999,221	637,615	637,615	689,964	638,818	1,000,424	638,818
EPA Indirect Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in Estimate Year's Dollars	990,800	629,194	629,194	680,340	636,412	998,018	636,412	636,412	688,761	637,615	999,221	637,615	637,615	689,964	638,818	1,000,424	638,818
Costs in Year 2007 Dollars																	
Page Repository Construction Costs																	
Site Investigation and Eng. Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011
Cell Open/Closure	-	-	-	52,387	-	-	-	-	52,387	-	-	-	-	52,387	-	-	-
Final Cell Closure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	275,011	275,011	275,011	327,397	275,011	275,011	275,011	275,011	327,397	275,011	275,011	275,011	275,011	327,397	275,011	275,011	275,011
Operations & Maintenance Costs																	
Annual O&M	9,023	9,023	9,023	9,023	16,416	16,416	16,416	16,416	17,648	17,648	17,648	17,648	17,648	18,880	18,880	18,880	18,880
5-Year Review	385,548	-	-	-	-	385,548	-	-	-	-	385,548	-	-	-	-	385,548	-
Institutional Controls	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422
Subtotal O&M Costs	754,993	369,445	369,445	369,445	376,838	762,386	376,838	376,838	378,070	378,070	763,618	378,070	378,070	379,302	379,302	764,850	379,302
EPA and State of Idaho Oversight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs	1,030,003	644,455	644,455	696,842	651,848	1,037,396	651,848	651,848	705,467	653,080	1,038,628	653,080	653,080	706,699	654,313	1,039,861	654,313
EPA Indirect Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in Year 2007 Dollars	1,030,003	644,455	644,455	696,842	651,848	1,037,396	651,848	651,848	705,467	653,080	1,038,628	653,080	653,080	706,699	654,313	1,039,861	654,313
Costs in PV Year 2008 Dollars																	
Page Repository Construction Costs																	
Site Investigation and Eng. Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	205,887	199,638	194,268	189,131	183,696	178,913	174,605	170,323	166,808	163,113	160,063	158,438	155,751	152,741	150,260	146,243	140,561
Cell Open/Closure	-	-	-	36,028	-	-	-	-	31,775	-	-	-	-	29,096	-	-	-
Final Cell Closure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	205,887	199,638	194,268	225,158	183,696	178,913	174,605	170,323	198,584	163,113	160,063	158,438	155,751	181,837	150,260	146,243	140,561
Operations & Maintenance Costs																	
Annual O&M	6,755	6,550	6,374	6,205	10,965	10,680	10,422	10,167	10,704	10,467	10,272	10,167	9,995	10,486	10,316	10,040	9,650
5-Year Review	288,640	-	-	-	-	250,824	-	-	-	-	224,399	-	-	-	-	205,023	-
Institutional Controls	269,830	261,641	254,603	247,870	240,747	234,478	228,833	223,221	218,615	213,772	209,775	207,644	204,123	200,179	196,927	191,662	184,216
Subtotal O&M Costs	565,225	268,191	260,976	254,075	251,712	495,982	239,255	233,388	229,319	224,240	444,446	217,812	214,118	210,665	207,243	406,725	193,866
EPA and State of Idaho Oversight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs	771,112	467,829	455,244	479,234	435,408	674,895	413,860	403,711	427,903	387,353	604,509	376,249	369,869	392,502	357,503	552,968	334,428
EPA Indirect Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in PV Year 2008 Dollars	771,112	467,829	455,244	479,234	435,408	674,895	413,860	403,711	427,903	387,353	604,509	376,249	369,869	392,502	357,503	552,968	334,428

Table D-3: Revised Summary of Estimated Future Costs -- Coeur d'Alene Bunker Hill Box

Activity	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Inflation Factor	1.978	2.024	2.070	2.118	2.167	2.216	2.267	2.320	2.373	2.427	2.483	2.540	2.599	2.659	2.720	2.782	2.846	2.912
Discount Factor	0.252	0.240	0.229	0.219	0.208	0.199	0.190	0.181	0.172	0.164	0.157	0.149	0.143	0.136	0.130	0.124	0.118	0.112
Costs in Estimate Year's Dollars																		
Page Repository Construction Costs																		
Site Investigation and Eng. Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498
Cell Open/Closure	-	51,146	-	-	-	-	51,146	-	-	-	-	51,146	-	-	-	-	51,146	-
Final Cell Closure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	268,498	319,644	268,498	268,498	268,498	268,498	319,644	268,498	268,498	268,498	268,498	319,644	268,498	268,498	268,498	268,498	319,644	268,498
Operations & Maintenance Costs																		
Annual O&M	18,433	19,636	19,636	19,636	19,636	19,636	20,839	20,839	20,839	20,839	20,839	22,042	22,042	22,042	22,042	22,042	23,245	23,245
5-Year Review	-	-	-	361,606	-	-	-	-	361,606	-	-	-	-	361,606	-	-	-	-
Institutional Controls	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887
Subtotal O&M Costs	370,320	371,523	371,523	733,129	371,523	371,523	372,726	372,726	734,332	372,726	372,726	373,929	373,929	735,535	373,929	373,929	375,132	375,132
EPA and State of Idaho Oversight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs	638,818	691,167	640,021	1,001,627	640,021	640,021	692,370	641,224	1,002,830	641,224	641,224	693,573	642,427	1,004,033	642,427	642,427	694,776	643,630
EPA Indirect Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in Estimate Year's Dollars	638,818	691,167	640,021	1,001,627	640,021	640,021	692,370	641,224	1,002,830	641,224	641,224	693,573	642,427	1,004,033	642,427	642,427	694,776	643,630
Costs in Year 2007 Dollars																		
Page Repository Construction Costs																		
Site Investigation and Eng. Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011
Cell Open/Closure	-	52,387	-	-	-	-	52,387	-	-	-	-	52,387	-	-	-	-	52,387	-
Final Cell Closure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	275,011	327,397	275,011	275,011	275,011	275,011	327,397	275,011	275,011	275,011	275,011	327,397	275,011	275,011	275,011	275,011	327,397	275,011
Operations & Maintenance Costs																		
Annual O&M	18,880	20,112	20,112	20,112	20,112	20,112	21,344	21,344	21,344	21,344	21,344	22,577	22,577	22,577	22,577	22,577	23,809	23,809
5-Year Review	-	-	-	385,548	-	-	-	-	385,548	-	-	-	-	385,548	-	-	-	-
Institutional Controls	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422
Subtotal O&M Costs	379,302	380,534	380,534	766,082	380,534	380,534	381,766	381,766	767,314	381,766	381,766	382,999	382,999	768,547	382,999	382,999	384,231	384,231
EPA and State of Idaho Oversight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs	654,313	707,932	655,545	1,041,093	655,545	655,545	709,164	656,777	1,042,325	656,777	656,777	710,396	658,009	1,043,557	658,009	658,009	711,628	659,241
EPA Indirect Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in Year 2007 Dollars	654,313	707,932	655,545	1,041,093	655,545	655,545	709,164	656,777	1,042,325	656,777	656,777	710,396	658,009	1,043,557	658,009	658,009	711,628	659,241
Costs in PV Year 2008 Dollars																		
Page Repository Construction Costs																		
Site Investigation and Eng. Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	137,121	133,764	130,490	127,296	124,180	121,141	118,175	115,283	112,461	109,708	107,023	104,403	101,847	99,354	96,922	94,550	92,236	89,978
Cell Open/Closure	-	25,481	-	-	-	-	22,511	-	-	-	-	19,888	-	-	-	-	17,570	-
Final Cell Closure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	137,121	159,245	130,490	127,296	124,180	121,141	140,687	115,283	112,461	109,708	107,023	124,291	101,847	99,354	96,922	94,550	109,806	89,978
Operations & Maintenance Costs																		
Annual O&M	9,414	9,783	9,543	9,310	9,082	8,859	9,172	8,947	8,728	8,515	8,306	8,571	8,361	8,156	7,957	7,762	7,985	7,790
5-Year Review	-	-	-	178,461	-	-	-	-	157,663	-	-	-	-	139,289	-	-	-	-
Institutional Controls	179,707	175,308	171,017	166,831	162,747	158,764	154,878	151,087	147,388	143,781	140,261	136,828	133,479	130,211	127,024	123,915	120,882	117,923
Subtotal O&M Costs	189,121	185,091	180,560	354,602	171,829	167,623	164,050	160,034	313,780	152,295	148,567	145,399	141,840	277,656	134,981	131,677	128,867	125,713
EPA and State of Idaho Oversight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs	326,242	344,336	311,051	481,898	296,009	288,764	304,736	275,317	426,241	262,003	255,590	269,689	243,687	377,011	231,903	226,227	238,672	215,690
EPA Indirect Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in PV Year 2008 Dollars	326,242	344,336	311,051	481,898	296,009	288,764	304,736	275,317	426,241	262,003	255,590	269,689	243,687	377,011	231,903	226,227	238,672	215,690

Table D-3: Revised Summary of Estimated Future Costs -- Coeur d'Alene Bunker Hill Box

Activity	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072
	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66
Inflation Factor	2.979	3.047	3.117	3.189	3.262	3.337	3.414	3.493	3.573	3.655	3.739	3.825	3.913	4.003	4.095	4.190	4.286	4.384
Discount Factor	0.107	0.102	0.097	0.093	0.089	0.084	0.081	0.077	0.073	0.070	0.067	0.064	0.061	0.058	0.055	0.053	0.050	0.048
Costs in Estimate Year's Dollars																		
Page Repository Construction Costs																		
Site Investigation and Eng. Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498
Cell Open/Closure	-	-	-	51,146	-	-	-	-	51,146	-	-	-	-	51,146	-	-	-	-
Final Cell Closure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	268,498	268,498	268,498	319,644	268,498	268,498	268,498	268,498	319,644	268,498	268,498	268,498	268,498	319,644	268,498	268,498	268,498	268,498
Operations & Maintenance Costs																		
Annual O&M	23,245	23,245	23,245	24,448	24,448	24,448	24,448	24,448	25,651	25,651	25,651	25,651	25,651	26,854	26,854	26,854	26,854	26,854
5-Year Review	361,606	-	-	-	-	361,606	-	-	-	-	361,606	-	-	-	-	361,606	-	-
Institutional Controls	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887
Subtotal O&M Costs	736,738	375,132	375,132	376,335	376,335	737,941	376,335	376,335	377,538	377,538	739,144	377,538	377,538	378,741	378,741	740,347	378,741	378,741
EPA and State of Idaho Oversight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs	1,005,236	643,630	643,630	695,979	644,833	1,006,439	644,833	644,833	697,182	646,036	1,007,642	646,036	646,036	698,385	647,239	1,008,845	647,239	647,239
EPA Indirect Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in Estimate Year's Dollars	1,005,236	643,630	643,630	695,979	644,833	1,006,439	644,833	644,833	697,182	646,036	1,007,642	646,036	646,036	698,385	647,239	1,008,845	647,239	647,239
Costs in Year 2007 Dollars																		
Page Repository Construction Costs																		
Site Investigation and Eng. Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011
Cell Open/Closure	-	-	-	52,387	-	-	-	-	52,387	-	-	-	-	52,387	-	-	-	-
Final Cell Closure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	275,011	275,011	275,011	327,397	275,011	275,011	275,011	275,011	327,397	275,011	275,011	275,011	275,011	327,397	275,011	275,011	275,011	275,011
Operations & Maintenance Costs																		
Annual O&M	23,809	23,809	23,809	25,041	25,041	25,041	25,041	25,041	26,273	26,273	26,273	26,273	26,273	27,505	27,505	27,505	27,505	27,505
5-Year Review	385,548	-	-	-	-	385,548	-	-	-	-	385,548	-	-	-	-	385,548	-	-
Institutional Controls	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422
Subtotal O&M Costs	769,779	384,231	384,231	385,463	385,463	771,011	385,463	385,463	386,695	386,695	772,243	386,695	386,695	387,927	387,927	773,475	387,927	387,927
EPA and State of Idaho Oversight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs	1,044,789	659,241	659,241	712,860	660,473	1,046,021	660,473	660,473	714,092	661,706	1,047,254	661,706	661,706	715,325	662,938	1,048,486	662,938	662,938
EPA Indirect Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in Year 2007 Dollars	1,044,789	659,241	659,241	712,860	660,473	1,046,021	660,473	660,473	714,092	661,706	1,047,254	661,706	661,706	715,325	662,938	1,048,486	662,938	662,938
Costs in PV Year 2008 Dollars																		
Page Repository Construction Costs																		
Site Investigation and Eng. Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	87,775	85,627	83,531	81,486	79,492	77,546	75,648	73,796	71,990	70,228	68,509	66,832	65,196	63,600	62,043	60,524	59,043	57,598
Cell Open/Closure	-	-	-	15,522	-	-	-	-	13,713	-	-	-	-	12,115	-	-	-	-
Final Cell Closure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	87,775	85,627	83,531	97,009	79,492	77,546	75,648	73,796	85,703	70,228	68,509	66,832	65,196	75,715	62,043	60,524	59,043	57,598
Operations & Maintenance Costs																		
Annual O&M	7,599	7,413	7,232	7,420	7,238	7,061	6,888	6,719	6,878	6,709	6,545	6,385	6,228	6,361	6,205	6,053	5,905	5,761
5-Year Review	123,056	-	-	-	-	108,715	-	-	-	-	96,045	-	-	-	-	84,852	-	-
Institutional Controls	115,036	112,220	109,474	106,794	104,180	101,630	99,142	96,715	94,348	92,039	89,786	87,588	85,444	83,352	81,312	79,322	77,380	75,486
Subtotal O&M Costs	245,691	119,634	116,705	114,214	111,418	217,405	106,030	103,435	101,225	98,748	192,375	93,973	91,672	89,713	87,517	170,227	83,285	81,247
EPA and State of Idaho Oversight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs	333,467	205,260	200,236	211,222	190,910	294,951	181,678	177,231	186,929	168,975	260,884	160,804	156,868	165,428	149,561	230,751	142,328	138,844
EPA Indirect Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in PV Year 2008 Dollars	333,467	205,260	200,236	211,222	190,910	294,951	181,678	177,231	186,929	168,975	260,884	160,804	156,868	165,428	149,561	230,751	142,328	138,844

Table D-3: Revised Summary of Estimated Future Costs -- Coeur d'Alene Bunker Hill Box

Activity	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090
	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84
Inflation Factor	4.485	4.588	4.694	4.802	4.912	5.025	5.141	5.259	5.380	5.504	5.631	5.760	5.892	6.028	6.167	6.309	6.454	6.602
Discount Factor	0.046	0.043	0.041	0.039	0.038	0.036	0.034	0.033	0.031	0.030	0.028	0.027	0.026	0.025	0.023	0.022	0.021	0.020
Costs in Estimate Year's Dollars																		
Page Repository Construction Costs																		
Site Investigation and Eng. Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498
Cell Open/Closure	51,146	-	-	-	-	51,146	-	-	-	-	51,146	-	-	-	-	51,146	-	-
Final Cell Closure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	319,644	268,498	268,498	268,498	268,498	319,644	268,498	268,498	268,498	268,498	319,644	268,498	268,498	268,498	268,498	319,644	268,498	268,498
Operations & Maintenance Costs																		
Annual O&M	28,057	28,057	28,057	28,057	28,057	29,260	29,260	29,260	29,260	29,260	30,463	30,463	30,463	30,463	30,463	31,666	31,666	31,666
5-Year Review	-	-	361,606	-	-	-	-	361,606	-	-	-	-	361,606	-	-	-	-	361,606
Institutional Controls	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887
Subtotal O&M Costs	379,944	379,944	741,550	379,944	379,944	381,147	381,147	742,753	381,147	381,147	382,350	382,350	743,956	382,350	382,350	383,553	383,553	745,159
EPA and State of Idaho Oversight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs	699,588	648,442	1,010,048	648,442	648,442	700,791	649,645	1,011,251	649,645	649,645	701,994	650,848	1,012,454	650,848	650,848	703,197	652,051	1,013,657
EPA Indirect Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in Estimate Year's Dollars	699,588	648,442	1,010,048	648,442	648,442	700,791	649,645	1,011,251	649,645	649,645	701,994	650,848	1,012,454	650,848	650,848	703,197	652,051	1,013,657
Costs in Year 2007 Dollars																		
Page Repository Construction Costs																		
Site Investigation and Eng. Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011
Cell Open/Closure	52,387	-	-	-	-	52,387	-	-	-	-	52,387	-	-	-	-	52,387	-	-
Final Cell Closure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	327,397	275,011	275,011	275,011	275,011	327,397	275,011	275,011	275,011	275,011	327,397	275,011	275,011	275,011	275,011	327,397	275,011	275,011
Operations & Maintenance Costs																		
Annual O&M	28,738	28,738	28,738	28,738	28,738	29,970	29,970	29,970	29,970	29,970	31,202	31,202	31,202	31,202	31,202	32,434	32,434	32,434
5-Year Review	-	-	385,548	-	-	-	-	385,548	-	-	-	-	385,548	-	-	-	-	385,548
Institutional Controls	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422
Subtotal O&M Costs	389,159	389,159	774,707	389,159	389,159	390,392	390,392	775,940	390,392	390,392	391,624	391,624	777,172	391,624	391,624	392,856	392,856	778,404
EPA and State of Idaho Oversight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs	716,557	664,170	1,049,718	664,170	664,170	717,789	665,402	1,050,950	665,402	665,402	719,021	666,634	1,052,182	666,634	666,634	720,253	667,867	1,053,415
EPA Indirect Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in Year 2007 Dollars	716,557	664,170	1,049,718	664,170	664,170	717,789	665,402	1,050,950	665,402	665,402	719,021	666,634	1,052,182	666,634	666,634	720,253	667,867	1,053,415
Costs in PV Year 2008 Dollars																		
Page Repository Construction Costs																		
Site Investigation and Eng. Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	56,188	54,812	53,471	52,162	50,885	49,640	48,425	47,239	46,083	44,955	43,855	42,781	41,734	40,712	39,716	38,744	37,795	36,870
Cell Open/Closure	10,703	-	-	-	-	9,456	-	-	-	-	8,354	-	-	-	-	7,380	-	-
Final Cell Closure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Construction Costs	66,891	54,812	53,471	52,162	50,885	59,095	48,425	47,239	46,083	44,955	52,208	42,781	41,734	40,712	39,716	46,124	37,795	36,870
Operations & Maintenance Costs																		
Annual O&M	5,871	5,728	5,587	5,451	5,317	5,410	5,277	5,148	5,022	4,899	4,976	4,854	4,735	4,619	4,506	4,569	4,457	4,348
5-Year Review	-	-	74,963	-	-	-	-	66,226	-	-	-	-	58,508	-	-	-	-	51,690
Institutional Controls	73,638	71,836	70,078	68,362	66,689	65,056	63,464	61,911	60,395	58,917	57,475	56,068	54,695	53,357	52,051	50,776	49,534	48,321
Subtotal O&M Costs	79,510	77,564	150,628	73,813	72,006	70,466	68,741	133,285	65,417	63,816	62,450	60,922	117,939	57,976	56,557	55,346	53,991	104,359
EPA and State of Idaho Oversight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs	146,401	132,376	204,099	125,975	122,891	129,561	117,166	180,524	111,500	108,771	114,659	103,703	159,673	98,688	96,272	101,470	91,786	141,229
EPA Indirect Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in PV Year 2008 Dollars	146,401	132,376	204,099	125,975	122,891	129,561	117,166	180,524	111,500	108,771	114,659	103,703	159,673	98,688	96,272	101,470	91,786	141,229

Table D-3: Revised Summary of Estimated Future Costs -- Coeur d'Alene Bunker Hill Box

Activity	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106
	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
Inflation Factor	6.754	6.909	7.068	7.231	7.397	7.567	7.741	7.919	8.101	8.288	8.478	8.673	8.873	9.077	9.286	9.499
Discount Factor	0.019	0.018	0.018	0.017	0.016	0.015	0.015	0.014	0.013	0.013	0.012	0.011	0.011	0.010	0.010	0.009
Costs in Estimate Year's Dollars																
Page Repository Construction Costs																
Site Investigation and Eng. Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498	268,498
Cell Open/Closure	-	-	51,146	-	-	-	-	51,146	-	-	-	-	51,146	-	-	-
Final Cell Closure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	238,230
Subtotal Construction Costs	268,498	268,498	319,644	268,498	268,498	268,498	268,498	319,644	268,498	268,498	268,498	268,498	319,644	268,498	268,498	506,728
Operations & Maintenance Costs																
Annual O&M	31,666	31,666	32,869	32,869	32,869	32,869	32,869	34,072	34,072	34,072	34,072	34,072	35,275	35,275	35,275	35,275
5-Year Review	-	-	-	-	361,606	-	-	-	-	361,606	-	-	-	-	361,606	-
Institutional Controls	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887	351,887
Subtotal O&M Costs	383,553	383,553	384,756	384,756	746,362	384,756	384,756	385,959	385,959	747,565	385,959	385,959	387,162	387,162	748,768	387,162
EPA and State of Idaho Oversight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs	652,051	652,051	704,400	653,254	1,014,860	653,254	653,254	705,603	654,457	1,016,063	654,457	654,457	706,806	655,660	1,017,266	893,890
EPA Indirect Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in Estimate Year's Dollars	652,051	652,051	704,400	653,254	1,014,860	653,254	653,254	705,603	654,457	1,016,063	654,457	654,457	706,806	655,660	1,017,266	893,890
Costs in Year 2007 Dollars																
Page Repository Construction Costs																
Site Investigation and Eng. Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011	275,011
Cell Open/Closure	-	-	52,387	-	-	-	-	52,387	-	-	-	-	52,387	-	-	-
Final Cell Closure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	244,008
Subtotal Construction Costs	275,011	275,011	327,397	275,011	275,011	275,011	275,011	327,397	275,011	275,011	275,011	275,011	327,397	275,011	275,011	519,019
Operations & Maintenance Costs																
Annual O&M	32,434	32,434	33,666	33,666	33,666	33,666	33,666	34,898	34,898	34,898	34,898	34,898	36,131	36,131	36,131	36,131
5-Year Review	-	-	-	-	385,548	-	-	-	-	385,548	-	-	-	-	385,548	-
Institutional Controls	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422	360,422
Subtotal O&M Costs	392,856	392,856	394,088	394,088	779,636	394,088	394,088	395,320	395,320	780,868	395,320	395,320	396,553	396,553	782,101	396,553
EPA and State of Idaho Oversight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs	667,867	667,867	721,486	669,099	1,054,647	669,099	669,099	722,718	670,331	1,055,879	670,331	670,331	723,950	671,563	1,057,111	915,571
EPA Indirect Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in Year 2007 Dollars	667,867	667,867	721,486	669,099	1,054,647	669,099	669,099	722,718	670,331	1,055,879	670,331	670,331	723,950	671,563	1,057,111	915,571
Costs in PV Year 2008 Dollars																
Page Repository Construction Costs																
Site Investigation and Eng. Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baseline Site Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Annual Construction	35,968	35,087	34,228	33,391	32,573	31,776	30,998	30,239	29,499	28,777	28,073	27,386	26,715	26,061	25,423	24,801
Cell Open/Closure	-	-	6,520	-	-	-	-	5,760	-	-	-	-	5,089	-	-	-
Final Cell Closure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22,005
Subtotal Construction Costs	35,968	35,087	40,749	33,391	32,573	31,776	30,998	36,000	29,499	28,777	28,073	27,386	31,804	26,061	25,423	46,806
Operations & Maintenance Costs																
Annual O&M	4,242	4,138	4,190	4,088	3,988	3,890	3,795	3,837	3,743	3,652	3,562	3,475	3,510	3,424	3,340	3,258
5-Year Review	-	-	-	-	45,666	-	-	-	-	40,344	-	-	-	-	35,642	-
Institutional Controls	47,138	45,984	44,859	43,761	42,690	41,645	40,625	39,631	38,661	37,715	36,791	35,891	35,012	34,155	33,319	32,504
Subtotal O&M Costs	51,380	50,123	49,049	47,848	92,343	45,535	44,420	43,468	42,404	81,710	40,354	39,366	38,522	37,579	72,301	35,762
EPA and State of Idaho Oversight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EPA/State/Tribe Consulting/Collaboration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Oversight Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total EPA Direct Costs	87,348	85,210	89,798	81,239	124,916	77,311	75,418	79,468	71,903	110,487	68,426	66,751	70,326	63,640	97,725	82,568
EPA Indirect Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs in PV Year 2008 Dollars	87,348	85,210	89,798	81,239	124,916	77,311	75,418	79,468	71,903	110,487	68,426	66,751	70,326	63,640	97,725	82,568